IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	Unknown	)
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Filing Date:	Unknown	)
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Priority Date:	12 July 2000	)
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Applicant:	TURNER, William	)
		)
For:	TELEVISION SYSTEM	)

PRELIMINARY AMENDMENT

Director For Patents
Box: New Application
Washington, D.C. 20231

Dear Sir:

This is a preliminary amendment to the enclosed application entitled "Television System" claiming priority to British Patent Application No. 0016958.1 filed 12 July 2000.

In the Specification:

Please amend the specification as follows:

Page 1, after the title insert the following header and paragraph:

--CROSS-REFERENCE TO RELATED APPLICATION

This application claims priority to British Patent Application No. 0016958.1 filed 12 July 2000.--;

Page 1, prior to the first paragraph, add the Header:

--BACKGROUND OF THE INVENTION–

Page 1, lines 10, 12, 13, 19, 22, 23, 25 two occurrences, and 29, change "programme" to --program--; line 9, change "Programme" to --Program--.

Page 2, before line 3 insert the Header:

--SUMMARY OF THE INVENTION–

Page 2, lines 5, 12, 14, 16, and 19 change "programme" to --program--; line 12, change "characterised" to --characterized--; line 21, change "programmes" to --programs--.

Page 3, lines 3, 16, 18, 20, 21, 23, 25, 26 two occurrence, 27 and 29, change "programme" to --program--; lines 19 and 20, change "programmes" to --programs--.

Page 4, lines 13, 16, 18, 24 and 30 change "programme" to --program--; lines 13 and 30, change "characterised" to --characterized--.

Page 5, lines 3, 4, and 14, change "programme" to --program--; lines 16 and 19, change "programmes" to --programs--;

Page 5, before line 20, add the Header:

--DESCRIPTION OF THE DRAWING--;

Page 5, before line 25, add the Header:

--DESCRIPTION OF THE PREFERRED EMBODIMENTS--.

Page 6, lines 12, 24, 29 and 30, change "programme" to --program--; lines 12, 16, and 21 change "programmes" to --programs--; line 10, change "Programme" to --Program--.

Page 7, lines 1 (two occurrences) and 2, change "programme" to --program--; line 6 change "programmes" to --programs--;

Page 7, add the following paragraph after the last line:

--While the invention has been described with a certain degree of particularly, it is manifest that many changes may be made in the details of construction and the arrangement of components without departing from the spirit and scope of this disclosure. It is understood that the invention is not limited to the embodiments set forth herein for purposes of exemplification, but is to be limited only by the scope of the attached claim or claims, including the full range of equivalency

to which each element thereof is entitled.--

In the Claims:

1. (Amended) A television system [including], said system comprising: a display screen [(2)], a broadcast data receiver [(4)] for receiving digital data via terrestrial, cable or digital means from a broadcaster [(6)] and generating visual/audio and/or auxiliary data therefrom, said television system including memory means for storing data relating to [programme] program information [characterised in that] wherein said television system is provided with a search facility to allow a user to search said memory means by generating a user request for [programme] program information, and said television system is capable of matching the request with any corresponding [programme] program information in said memory for display on said display screen [(2)].

2. (Amended) A television system according to claim 1 [characterised in that the] wherein said memory means contains subtitle and/or closed caption data [(14)] relating to [programme] program information.

3. (Amended) A television system according to claim 1 [characterised in that] wherein said memory means contains descriptions of [programmes] programs.

4. (Amended) A television system according to claim 1 [characterised in that] wherein a user query box is provided on [the] said display screen [(2)] for a user to type in their search request.

5. (Amended) A television system according to claim 1 [characterised in that] wherein said user request [includes any or any combination] may be selected from the group consisting of key words, phrases [or] and codes defined by [the] said broadcaster [(6)].

6. (Amended) A television system according to claim 1 [characterised in that] wherein said memory means is located at [the] said broadcaster [(6)].

7. (Amended) A television system according to claim 1 [characterised in that] wherein said memory means forms part of [the] said broadcast data receiver [(4)].

8. (Amended) A television system according to claim 6 [or 7 characterised in that] wherein said broadcaster [(6)] updates said memory means with future and/or real time [programme] program information.

9. (Amended) A television system according to claim 1 [characterised in that the programme] wherein said program information identified corresponding to [the] said user['s] request includes any or any combination of the time and/or date of showing the identified [programme] program, the length of the [programme] program, the channel the [programme] program is to be shown [or] and a summary [or] of the [programme] program shown.

10. (Amended) A television system according to claim 1 [characterised in that the programme] wherein said program information identified corresponding to [a] said user['s] request includes electronic [programme] program guide [(12)] information.

11. (Amended) A television system according to claim 1 [characterised in that] wherein the format of [the programme] said program information identified in response to said user['s] query is determined by [the] said broadcaster [(6)].

12. (Amended) A television system according to claim 1 [characterised in that] wherein the format of [the programme] said program information identified in response to said user['s] query is determined by the user and is selectable via an options menu.

13. (Amended) A television system according to claim 1 [characterised in that] wherein frequently requested information is stored in said memory means in a saved format.

14. (Amended) A television system, said system comprising:[including] a display screen [(2)] , a broadcast data receiver [(4)] for receiving digital data via terrestrial, cable or digital means from a broadcaster [(6)] and generating visual/audio and/or auxiliary data therefrom, said broadcaster [(6)] including memory means for storing subtitle and/or closed caption data [(14)] relating to [programme] program information [characterised in that] wherein said television system is provided with a search facility to allow a user to search said memory means by generating a user request for [programme] program information, and said television system [is] being capable of matching the request with any corresponding [programme] program information in said memory for display on said display screen [(2)].

15. (Amended) A television system according to claim 14 [characterised in that] wherein all or selective data contained in said memory means at said broadcaster [(6)] is sent to memory

means in said broadcast data receiver [(4)] for searching by a user.

16. (Amended) A method of obtaining [programme] program information in a television system having a display screen, a broadcast data receiver for receiving digital data via terrestrial, cable or digital means from a broadcaster and generating visual/audio and/or auxiliary data therefrom, and memory means for storing data relating to program information in response to a user's query, [said television system including a display screen [2], a broadcast data receiver [4] for receiving digital data via terrestrial, cable or digital means from a broadcaster [6] and generating visual/audio and/or auxiliary data therefrom, said television system including memory means for storing data relating to programme information characterised in that] wherein said method includes the steps of:

inputting a query into said television system;[,]

searching said memory means for [programme] program information relating to said query[,]; and

displaying on said display screen [(2)] identified [programme] program information corresponding to said query.

17. (Amended) A method according to claim 16 [characterised in that] wherein said stored [programme] program information includes subtitle and/or closed caption data [(14)].

18. (Amended) A method according to claim 16 [characterised in that the] wherein said memory means searched is located at [the] said broadcaster [(6)].

19. (Amended) A method according to claim 16 [characterised in that the] wherein said memory searched is located at [the] said broadcast data receiver [(4)].

Add new claim 20 as follows:

20. (New) A television system according to claim 7 wherein said broadcaster updates said memory means with future and/or real time program information.

REMARKS

Attached are the marked up versions of the claims and new paragraphs as required in Section 1.121(4) (ii).

The application should now be in condition for examination, which is respectfully requested.

Respectfully Submitted

HEAD, JOHNSON & KACHIGIAN

Dated: July 11, 2001

BY: _____
Mark G. Kachigian, Reg. No. 32,840
228 West 17th Place
Tulsa, Oklahoma 74119
(918) 584-4187
Attorneys for Applicant

New Header to be inserted on Page 1, before line 1:

CROSS-REFERENCE TO RELATED APPLICATION

This application claims priority to British Patent Application No. 0016958.1 filed 12 July 2000.--;

BACKGROUND OF THE INVENTION

Replacement paragraphs for Page 1:

A television system hereinafter described includes a broadcast data receiver (called a set top box) for receiving digital data via terrestrial, cable or digital means, transmitted from a broadcaster at a remote location. The digital data results in a large number of channels and programs available for selection by a user. Conventional listing means for the large number of channels and programs are inadequate and this has resulted in the development of Electronic Program Guides (EPGs).

A user will typically select a program to watch on the television system based on whether the content of the program is of interest to them. Conventionally a user obtains information relating to the content of the program using an EPG or via a television guide in a paper format. This information is typically in the form of a short, brief summary. The summary is likely to have been composed by a third party who may not share similar interests to that of the user, and thus not include information which the user may find of use for deciding whether the program is of interest to them. Therefore, the conventional summaries provided in TV listings do not generally encapsulate sufficient information for a user to determine whether a program is of interest to them.

Replacement paragraphs for Page 1 continued:

For example, a segmented program (i.e., Tomorrow's World) will typically trailer/advertise one or two major segments of the program, prior to the showing of the program, in order to inform the viewers as to the general theme of that particular show. However, a viewer may be interested in a smaller, minor segment of the show which is not advertised or shown as a trailer prior to the showing of the program. The user may

New paragraph Header to be inserted into Page 2 before line 3:

SUMMARY OF THE INVENTION

Replacement paragraph for page 2:

It is therefore an aim of the present invention to overcome the abovementioned problem and to provide a user with a means of finding further information relating to a program if required.

According to a first aspect of the present invention there is provided a television system including a display screen, a broadcast data receiver for receiving digital data via terrestrial, cable or digital means from a broadcaster and generating audio/visual and/or auxiliary data therefrom, said television system including memory means for storing data relating to program information characterized in that said television system is provided with a search facility to allow a user to search said memory means by generating a user request for program information, and said television system is capable of matching the request with any corresponding program information in the memory for display on said display screen.

Preferably the memory means contains subtitle and/or closed caption data relating to program information.

Further preferably the memory means is supplemented with descriptions of programs where subtitles are not provided in advance. For example, programs such as Live News Broadcasts.

Replacement paragraphs for page 3

In one embodiment the memory means is located at the broadcaster station. The broadcaster typically updates the memory with future and real time program information to form a database accessible by a user using the search tool. Advantages of providing the memory means at the broadcaster end/video server is that more computing power can be applied for searching, thus resulting in faster searching and more efficient use of processor time. In addition, the memory available at the broadcaster end is larger and so more data can be stored for searching.

In one embodiment the memory means is located in the broadcast data receiver. The broadcaster can send program information to the broadcast data receiver for storage in the memory means at pre-determined intervals. The program information can relate to future programs and/or real time programs. The program information can be stored in the memory means until the program has been shown on the display screen.

Preferably the program information to which the identified request criteria are matched can include the time and date of showing of the program containing the criteria, the length of the program, the channel the program is to be shown thereon, a summary of the program to be shown and/or the like.

Preferably the format of the program information displayed on the display screen in response to a user's query is determined

Replacement paragraphs for Page 4:

According to a second aspect of the present invention there is provided a television system including a display screen, a broadcast data receiver for receiving digital data via terrestrial, cable or digital means from a broadcaster and generating visual/audio and/or auxiliary data therefrom, said broadcaster including memory means for storing subtitle and/or closed caption data relating to program information characterized in that said television system is provided with a search facility to allow a user to search said memory means by generating a user request for program information, and said television system is capable of matching the request with any corresponding program information in said memory for display on said display screen.

According to a further aspect of the present invention there is provided a method of obtaining program information in a television system in response to a user's query, said television system including a display screen, a broadcast data receiver for receiving digital data via terrestrial, cable or digital means from a broadcaster and generating visual/audio and/or auxiliary data therefrom, said television system including memory means for storing data relating to program information characterized in

Replacement paragraphs for Page 5:

that said method includes the steps of inputting a query into said television system, searching said memory means for program information relating to said query, displaying on said display screen identified program information corresponding to said query.

An advantage of the present invention is that it provides the user with access to a large amount of information, which is already present in databases, which is unbiased information, and which includes program specific data such as subtitle and closed-caption text, as well as verbose descriptions of programs that do not carry subtitle/closed-caption data. Thus the present invention combines the resource of subtitle/closed caption data with Internet style search engine tools, such as Natural Language Processing (NLP) to allow the user to identify which programs are likely to be of interest to them.

Headers to be inserted into Page 5:

Before line 20:

"**DESCRIPTION OF THE DRAWINGS**";

Before line 25:

"**DESCRIPTION OF THE PREFERRED EMBODIMENTS**".

Replacement paragraphs for Page 6:

The user's query is sent to a server 8 located at broadcast station 6, as shown by arrows 10. The server 8 processes the query expression to identify criteria on which the search is to be undertaken. The server 8 then searches EPG and/or closed caption databases 12 and 14 respectively for matches to the determined criteria. Program information containing the matched criteria is cross referenced with EPG data to produce the resulting program or programs and details of the same are sent from the server 8 to the set top box 4 for display on display screen 2, as shown by arrows 16.

The results to the user's query can be displayed in a form that the user can browse and select programs to watch and record. The display format can be selected by the user from a drop down menu or the display format can be determined by the broadcaster.

For example, a user may send a query to the server requesting information as to "what programs are on this evening relating to cars". The server processes this request and searches the subtitle/closed caption database for information relating to the key words "cars" and "this evening". Any program information found containing the key words is matched with information from the EPG database and EPG format data is returned to the set top box for display on the display screen. For example, the information returned may include the name of a program containing the requested information, the channel on which the program is to be shown, the time of the

Replacement paragraphs for Page 7:

program, the length of the program, a brief summary of what the program is about and/or the like.

Thus it can be seen that the present invention provides a link between search engine technology and subtitle/closed caption data for use with a television system to allow a user to identity which programs are of interest to them.

New paragraph for page 7 to be inserted after the last line:

While the invention has been described with a certain degree of particularly, it is manifest that many changes may be made in the details of construction and the arrangement of components without departing from the spirit and scope of this disclosure. It is understood that the invention is not limited to the embodiments set forth herein for purposes of exemplification, but is to be limited only by the scope of the attached claim or claims, including the full range of equivalency to which each element thereof is entitled.

1. (Amended) A television system, said system comprising: a display screen, a broadcast data receiver for receiving digital data via terrestrial, cable or digital means from a broadcaster and generating visual/audio and/or auxiliary data therefrom, said television system including memory means for storing data relating to program information wherein said television system is provided with a search facility to allow a user to search said memory means by generating a user request for program information, and said television system is capable of matching the request with any corresponding program information in said memory for display on said display screen.

2. (Amended) A television system according to claim 1 wherein said memory means contains subtitle and/or closed caption data relating to program information.

3. (Amended) A television system according to claim 1 wherein said memory means contains descriptions of programs.

4. (Amended) A television system according to claim 1 wherein a user query box is provided on said display screen for a user to type in their search request.

5. (Amended) A television system according to claim 1 wherein said user request may be selected from the group consisting of key words, phrases and codes defined by said broadcaster.

6. (Amended) A television system according to claim 1 wherein said memory means is located at said broadcaster.

7. (Amended) A television system according to claim 1 wherein said memory means forms part of said broadcast data receiver.

8. (Amended) A television system according to claim 6 wherein said broadcaster updates said memory means with future and/or real time program information.

9. (Amended) A television system according to claim 1 wherein said program information identified corresponding to said user request includes any or any combination of the time and/or date of showing the identified program, the length of the program, the channel the program is to be shown and a summary of the program shown.

10. (Amended) A television system according to claim 1 wherein said program information identified corresponding to said user request includes electronic program guide information.

11. (Amended) A television system according to claim 1 wherein the format of said program information identified in response to said user query is determined by said broadcaster.

12. (Amended) A television system according to claim 1 wherein the format of said program information identified in response to said user query is determined by the user and is selectable via an options menu.

13. (Amended) A television system according to claim 1 wherein frequently requested information is stored in said memory means in a saved format.

14. (Amended) A television system, said system comprising: a display screen , a broadcast data receiver for receiving digital data via terrestrial, cable or digital means from a broadcaster and generating visual/audio and/or auxiliary data therefrom, said broadcaster including memory means for storing subtitle and/or closed caption data relating to program information wherein said television system is provided with a search facility to allow a user to search said memory means by generating a user request for program information, and said television system being capable of matching the request with any corresponding program information in said memory for display on said display screen.

15. (Amended) A television system according to claim 14 wherein all or selective data contained in said memory means at said broadcaster is sent to memory means in said broadcast data receiver for searching by a user.

16. (Amended) A method of obtaining program information in a television system having a display screen, a broadcast data receiver for receiving digital data via terrestrial, cable or digital means from a broadcaster and generating visual/audio and/or auxiliary data therefrom, and memory means for storing data relating to program information in response to a user's query, wherein said method includes the steps of:

inputting a query into said television system;

searching said memory means for program information relating to said query; and

displaying on said display screen identified program information corresponding to said query.

17. (Amended) A method according to claim 16 wherein said stored program information includes subtitle and/or closed caption data.

18. (Amended) A method according to claim 16 wherein the memory means searched is located at said broadcaster.

19. (Amended) A method according to claim 16 wherein the memory searched is located at said broadcast data receiver.

20. (New) A television system according to claim 7 wherein said broadcaster updates said memory means with future and/or real time program information.